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NOTE.

SINCE the article in our last number, on the history and resources of Baltimore, was published, we have been favored with a more full and accurate account of the water power in the neighborhood of that city, together with a corrected and very ingenious table exhibiting the capacity of this power to move machinery. The facts here communicated are curious and valuable, and we are glad to have an opportunity of laying them before our readers. It appears by the table, that the streams of water within *twenty miles* around Baltimore are adequate to keep in motion *one million six hundred and thirteen thousand* cotton spindles. Only a comparatively small portion of this immense power is as yet occupied, by the numerous flour mills, factories, and other manufacturing establishments, already in operation.

The annexed table needs no other explanation, than may be found in the statements, which follow. The two parts of the table express separately the portion embraced within ten miles of the city, and that beyond ten miles, but within twenty miles. In estimating the power of the streams for the average of the year, the surplus of the six wettest months has been excluded.

The numbers refer to the same numbers in the Table.

No. 1. Patapsco Falls.

First, within ten miles. This stream has 193 feet fall, or elevation above the tide at the head dam of Ellicott's old upper mill. The power used at Ellicott's mills generally is a fall of twelve feet, which has been assumed as a standard to which all the calculations of the capacity of the streams at each mill seat have been adapted, in the following statements. With this fall the Patapsco is competent, at the lowest stage of water ever known, to drive *four* pair of seven feet burr millstones. This state of water exists during but a very short period; for the greater part of the year, the stream possesses a power of twelve pair, and during the wet season a power of upwards of twenty pair of seven feet stones; it is, therefore, fair to assume for a mean estimate of the capacity of the stream, that works contemplated to be in operation the whole year may, with a judicious application of the water, be estimated to have a power, throughout the year, of *eight* pair of seven feet millstones, which are equal to *eleven* pair of six feet, which diameter has been assumed as a standard of comparison for expressing the power either in horse power, or in the number of spindles of cotton works,

with the usual appendant machinery. The 193 feet, divided by twelve, give 16 mill seats, each driving 11 pair of six feet millstones, making in all 176 pair, each pair equal to 2000, making 352,000 spindles, or 1760 horse powers. The same course of reasoning and calculation having been applied throughout, it will not be necessary to repeat it for each stream separately.

Secondly, beyond ten and within twenty miles. Five miles from Ellicott's upper mill, at the junction of the north and west branches, the elevation of this stream, by the levellings for the Potomac canal, is 269 feet above the tide; deducting from this the 193 feet below Ellicott's upper mill, the fall of these five miles is ascertained to be 76 feet, and the slope of the country warrants us to assume the same fall for the remaining five miles, which gives the whole fall 152 feet within the limits assigned in our calculations. We here assume that the stream possesses only half the power, which it has in the inner circumference, although both the branches are only considered as one. Therefore, 152 feet fall yield $12\frac{2}{3}$ mill seats, each driving $5\frac{1}{2}$ pair of mill stones; equal to $69\frac{2}{3}$ pair; equal to 139,000 spindles, or 697 horse powers.

No. 2. Great Gunpowder Falls.

At the distance of twentyone miles, on the York turnpike road, the elevation of this stream has been ascertained by the levellings for the Susquehanna canal to be $326\frac{3}{4}$ feet. The junction of the two branches is about a mile below this point, and exactly on the line of our circumference of twenty miles. An elevation of 300 feet may therefore be safely assumed for this point. A small portion only of this stream approaches within ten miles, including General Ridgely's works at Hampton; all the rest flows within the outer circumference. The power of the stream in its whole extent is equal to that of the Patapsco below Ellicott's mills, and the calculations have been made accordingly.

No. 3. Little Gunpowder Falls.

The whole of this stream lies between the inner and outer circumference; its fall has not been ascertained by any measurement, but it is believed that it may be safely compared to Jones' Falls in every respect, by allowing it a total fall of 250 feet, with a capacity of two pair of six feet millstones for every twelve feet fall.

No. 4. Jones' Falls.

Is entirely within the circumference of ten miles, its total fall is ascertained to be 259 feet, and its capacity two pair of six feet millstones for every twelve feet fall.

No. 4. Gwinn's Falls.

Within ten miles, has a fall of 372 feet, with a capacity of two pair of six feet millstones for every twelve feet fall.

Beyond ten miles, it contains William Owing's three mills, each with a fall of 20 feet, and competent with that fall for one pair of six feet millstones, the year round, making $\frac{3}{5}$ pair for our standard of twelve feet fall.

No. 6. Herring Run

Has a fall of 150 feet within five miles of the city, but the entire capacity of the whole stream does not exceed five pair of six feet millstones the whole year round, making for our standard of twelve feet fall, $\frac{2}{5}$ pair.

No. 7. Union Run

Is a branch of Jones' falls, and lies entirely within five miles of Baltimore; its whole fall is 106 feet, and its entire capacity two pair of six feet millstones, making $\frac{1}{5}$ th pair for our standard.

No. 8. Winters' Run

Lies near the outer boundary of the greater circumference, it has a fall of 150 feet, with a capacity of two pair of six feet millstones for every twelve feet fall.

Nos. 9, 10. Patuxent River.

Although this river discharges itself into the Chesapeake Bay at a very great distance from Baltimore, yet the most important part comes considerably within the outer circumference assumed for our limits. The junction of the two branches is just 20 miles from Baltimore; from this point, the north branch on which the Savage cotton factory is situated, lies entirely within our limits. The head race of this factory, according to the levellings for the Potomac canal, is 181 feet above the tide. Deducting 30 feet for the fall of the river below the junction, and adding 100 feet for the millseats known to exist above the Savage factory, we have a total fall of 250 feet for this branch, to which may be justly assigned, a power of $2\frac{1}{2}$ pair of millstones for every twelve feet fall.

The western or main branch of the Patuxent, flows within our limits, for a course of fifteen miles. From the same data as above, we may assign to this course a fall of 160 feet, with a power of four pair of six feet millstones for every twelve feet fall.

Corrected Summary Statement of the Water Power to drive Machinery, within the Circumference of a Circle of Twenty Miles Radius around the City of Baltimore. By Lewis Brantz, Esq.

Nos. of Reference.	Names of the Streams.	Within 10 miles of Baltimore.						Beyond 10 & within 20 miles of Balt.						Total power of the streams within twenty miles expressed in spindles.
		Total amount of fall in feet.	Capacity of the stream, with a fall of twelve feet, to drive a given number of pair 6 feet mill-stones, during the whole year.	Pair of 6 feet millstones.	Cotton spindles including the appendant machinery.	Horse Power.	Total amount of fall in feet.	Capacity of the stream with a fall of twelve feet to drive a given number of pair 6 feet mill-stones, during the whole year.	Pair of 6 feet millstones.	Cotton spindles, including the appendant machinery.	Horse Power.			
1	Patapsco Falls,	193 11	pair	176	352,000	1,760	152 5 1-2	69 2-3	139,000	697	491,000			
2	Great Gunpowder Falls,	36 11	"	33	66,000	330	264 11	" 242	484,000	2,420	550,000			
3	Little Gunpowder Falls,						250 2	" 42	82,000	420	82,000			
4	Jones' Falls,	259 2	"	43	86,000	430	60	3-5	3 6,000	30	86,000			
5	Gwynn's Falls,	372 2	"	62	124,000	620					130,000			
6	Herring Run,	150 0 2-5	"	5	10,000	50					10,000			
7	Union Run,	106 0 1-5	"	2	4,000	20					4,000			
8	Winter's Run,						150 2	" 25	50,000	250	50,000			
9	Patuxent, West Branch,						160 4	" 52	104,000	520	104,000			
10	Patuxent, North Branch,						250 2 1-2	" 53	106,000	530	106,000			
	Totals.			323	642,000				971,000		1,613,000			

Nos. of Reference.